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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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HEWLETT-PACKARD COMPANY  
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EXAMINER

NGUYEN, KEVIN M

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 11/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/892,312

Applicant(s)

LEE, SIEW FEI

Examiner

Kevin M. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4, 7, 8 and 10-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7, 8 and 10-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

1. In view of the Appeal Brief filed on 09/01/2005, PROSECUTION IS HEREBY REOPENED. The new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 10-20 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsui et al (US 5,430,262) hereinafter Matsui.

4. As to claims 1 and 20, Matsui teaches a jog dial for providing input signal to a device, (a ring-like knob 60, fig. 1, col. 10, line 44), said jog dial comprising:

It is noted that the first, second and third embodiments are operating the same functions, col. 8, lines 35-51;

a first and a second x-axis input [the embodiment 1 of Fig. 1 of Matsui expressly shows a first horizontal position input 35A and a second horizontal input 35C, see col. 4, lines 50-52 disclosing a push 27 having four push positions 35A, 35B, 35C and 35D];

a first and a second y-axis input [Fig. 1 of Matsui expressly show a first vertical position input 35B and a second vertical input 35D, see col. 4, lines 50-52, disclosing a push 27 having four push positions 35A, 35B, 35C and 35D];

a first and a second directional input [the embodiment 3 comprises the ring-like knob 60 is rotated to the right (in the clockwise direction), see col. 10, lines 44-45. The embodiment 3 as a preferred means of detecting the rotational angle of the ring-like knob 60, other means of direction can be also be used, see col. 10, lines 66-68. One person of ordinary skilled in the art to recognize that the ring-like knob 60 is rotated to the left (in the counterclockwise direction)];

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a joy pad [the push button 27, see fig. 1, the surface of the push button corresponds to the a joy pad as claimed];

an elastically deformable diaphragm located below the jog pad corresponding to each of the x-axis and y-axis input [elastic dome-shaped movable contacts 16A, 16B, 16C and 16D, col. 5, lines 6-7 located underneath each of four push positions 35A, 35B, 35C and 35D input];

a contact located below and associated with each the diaphragms arranged so that pressure applied to the joy pad at one of the x-axis or y-axis inputs result in deformation of the corresponding diaphragm and closure of the associated contact [in order for the push members 28B and 28D of the push button 27 not to depress the respective corresponding movable contacts 16B and 16D of the switch elements 18B and 18D when the push button 27 is tilted as in Fig. 6, see col. 6, lines 44-48];

wherein the said first and second directional inputs being operable by rotating the joy pad in a respective clockwise and anti-clockwise direction about a z-axis [the embodiment 3 comprises the ring-like knob 60 is rotated to the right (in the clockwise direction), see col. 10, lines 44-45. The embodiment 3 as a preferred means of detecting the rotational angle of the ring-like knob 60, other means of direction can be also be used, see col. 10, lines 66-68. One person of ordinary skilled in the art to recognize the ring-like knob 60 is rotated to the left (in the counterclockwise direction)].

5. As to claim 23, Matsui teaches a jog dial for providing input signal to a device, (a ring-like knob 60, fig. 1, col. 10, line 44), said jog dial comprising:

It is noted that the first, second and third embodiments are operating the same functions, col. 8, lines 35-51;

a first and a second x-axis input [the embodiment 1 of Fig. 1 of Matsui expressly shows a first horizontal position input 35A and a second horizontal input 35C, see col. 4, lines 50-52 disclosing a push 27 having four push positions 35A, 35B, 35C and 35D]

a first and a second y-axis input [Fig. 1 of Matsui expressly show a first vertical position input 35B and a second vertical input 35D, see col. 4, lines 50-52, disclosing a push 27 having four push positions 35A, 35B, 35C and 35D];

a first and a second directional input [the embodiment 3 comprises the ring-like knob 60 is rotated to the right (in the clockwise direction), see col. 10, lines 44-45. The embodiment 3 as a preferred means of detecting the rotational angle of the ring-like knob 60, other means of direction can be also be used, see col. 10, lines 66-68. One person of ordinary skilled in the art to recognize that the ring-like knob 60 is rotated to the left (in the counterclockwise direction)];

a central input [a push button 37, see figs 9 and 10];

a joy pad [the push button 27, see fig. 1, the surface of the push button corresponds to the a joy pad as claimed];

an elastically deformable diaphragm located below the jog pad corresponding to each of the x-axis and y-axis input [elastic dome-shaped movable contacts 16A, 16B, 16C and 16D, col. 5, lines 6-7 located underneath each of four push positions 35A, 35B, 35C and 35D input];

a contact located below and associated with each the diaphragms arranged so that pressure applied to the joy pad at one of the x-axis or y-axis inputs result in deformation of the corresponding diaphragm and closure of the associated contact [in order for the push members 28B and 28D of the push button 27 not to depress the respective corresponding movable contacts 16B and 16D of the switch elements 18B and 18D when the push button 27 is tilted as in Fig. 6, see col. 6, lines 44-48];

wherein the said first and second directional inputs being operable by rotating the joy pad in a respective clockwise and anti-clockwise direction about a z-axis [the embodiment 3 comprises the ring-like knob 60 is rotated to the right (in the clockwise direction), see col. 10, lines 44-45. The embodiment 3 as a preferred means of detecting the rotational angle of the ring-like knob 60, other means of direction can be also be used, see col. 10, lines 66-68. One person of ordinary skilled in the art to recognize the ring-like knob 60 is rotated to the left (in the counterclockwise direction)];

wherein pressure applied to the central input on the joy pad result in deformation of all the diaphragms located below the x-axis and y-axis inputs and closures of their associated contacts [when the depress force imposed on the push button 67 is removed, the push button 67 returns to its original position due to the elastic force of the spiral spring 69, an also the movable contact 65 is restored to its original dome-shape as shown in Fig. 16 because of its own elasticity, see col. 10, lines 33-38].

As to claim 10, Matsui teaches the 83-85 rectangular coordinate axes are rotated from the 82-84 coordinate axes by an angle  $45^{\circ}$ , see col. 5, lines 3-5. The embodiment 3 comprises the ring-like knob 60 is rotated to the right (in the clockwise direction), see

col. 10, lines 44-45. The embodiment 3 as a preferred means of detecting the rotational angle of the ring-like knob 60, other means of direction can be also be used, see col. 10, lines 66-68. One person of ordinary skilled in the art to recognize the ring-like knob 60 is rotated to the left (in the counterclockwise direction).

As to claim 11, Matsui teaches additionally in place of a base 11 which is molded integrally with supports and other elements described above, a printed wiring board can be used, see col. 11, lines 26-29.

As to claim 12, Matsui teaches the bias means 70 (the spiral spring 33, fig. 4) located between the jog pad 27 and an upper surface of the base 11 (see fig. 4). As to claim 13, Fig. 1 of Matsui expressly shows the jog pad 27 is marked to indicate the positioning of the input positions.

As to claim 14, Fig. 1 of Matsui expressly shown the jog pad 27 has an upper surface which patterned to enhance grip to the jog pad 27 by the user's finger.

As to claim 15, Fig. 5 of Matsui expressly shows the pivot 27A-D.

As to claim 16, Fig. 3 of Matsui expressly shows [the stopper extrusions 31-31D therefore provide an additional means of immobilizing the position of the push button 27 from rotating, see col. 5, lines 66-68].

As to claim 17, Matsui teaches four holes 46A-46D having projections 45A-45B, respectively are form in a push button 44, fig. 8, col. 7, lines 66-68.

As to claim 18, Fig. 3 of Matsui expressly shows the groove is annular so as to enable the joy pad 27 to rotate in clockwise direction.



As to claims 13 and 19, Fig. 1 of Matsui expressly shows the mark arrow and the projection of the button 35.

6. Claims 2-4, 7, 8, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Matsui et al (US 5,430,262) hereinafter Matsui in view of Goldenberg et al (US 6,636,197) hereinafter Goldenberg.

As to claim 2, Matsui teaches all of the claimed limitations, except for at least one diagonal input.

However, Goldenberg teaches a jog shuttle (the knob 26, see fig. 1) which moves in the four diagonal directions (col. 5, lines 35-36).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to was made to incorporate the four diagonal directional input as taught by Goldenberg into the Matsui's input device in order to achieve the benefit of provide greater control over section and other operation (see Goldenberg, col. 2, lines 9-10), alternatively, the controlled device can be a variety of the other electronic or computer devices (see Goldenberg, col. 4, lines 20-28).

As to claim 3, Fig. 1 of Goldberg expressly shows that the four diagonal input positions having a corresponding diagonal input position defined between two horizontal input positions and two vertical input positions.

As to claim 4, Goldenberg teaches a joy-dial according to claim 3 wherein the pressure applied to the diagonal input position on the jog pad [pressure on the knob 26 from the user can be detected, col. 10, lines 52-53], and Matsui incorporates the results in deformation of the associated diaphragms of the adjacent x-axis and y-axis inputs

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and closure of their associated contacts [results in deformation of the associated elastic dome-shaped 16A, 16B, 16C and 16D located adjacent of two 35A and 35B inputs, see col. 5, lines 6-7].

As to claim 7, Goldenberg teaches a joy-dial according to claim 1 further comprising a first and a second directional contact located below the joy pad and between the contacts associated with the x-axis and the y-axis inputs [the elastic slide contact 61 held on the bottom surface of the ring-like knob 60 will be sliding on the sliding on the circular arc-shaped fixed contact 53 and the position where both of the contacts are in touch with each other will be changed, see col. 10, lines 47-51].

Matsui teaches an engagement means is arranged to push against a biasing means so as to close the first and second direction contacts [the stopper extrusions 31-31D therefore provide an additional means of immobilizing the position of the push button 27 from rotating, see col. 5, lines 66-68].

As to claim 8, Matsui teaches a jog-dial according to claim 7 wherein the biasing means [a spiral spring 33] restores the joy pad to a home position [returning to its original position due to the force of the spiral spring 33, see col. 6, lines 38-43].

As to claims 21 and 22, Goldenberg teaches a microprocessor 202, see col. 10, lines 11-15. The microprocessor 202 inherently has the operating system. Display 14 can be a separate monitor displaying a graphical user interface or other graphical environment as controlled by a host computer, col. 4, lines 63-66.

***Response to Arguments***

7. Applicant's arguments with respect to claims 1-4, 7-8 and 11-23 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin M. Nguyen whose telephone number is 571-272-7697. The examiner can normally be reached on MON-THU from 8:00-6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick N. Edouard can be reached on 571-272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8000.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the Patent Application Information Retrieval system, see <http://portal.uspto.gov/external/portal/pair>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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KMN  
November 7, 2005

Kevin M. Nguyen  
Patent Examiner  
Art Unit 2674



**PATRICK N. EDOUARD**  
**SUPERVISORY PATENT EXAMINER**